FLWEMS Paramedic Medication Information For:

SOLU – MEDROL

(Methylprednisolone)

DRUG CLASS AND MECHANISM: Methylprednisolone is a synthetic (man-made) corticosteroid. Corticosteroids are naturally- occurring chemicals produced by the adrenal glands located adjacent to the kidneys. Corticosteroids block inflammation and are used in a wide variety of inflammatory diseases. There are numerous preparations of corticosteroids including oral tablets, capsules, liquids, topical creams and gels, inhalers, eye drops, and injectable and intravenous solutions. Methylprednisolone, a corticosteroid which is prescribed as an oral tablet or liquid, is addressed in this article.

PRESCRIPTION: yes

GENERIC AVAILABLE: yes

PRESCRIBED FOR: Methylprednisolone is used to achieve prompt suppression of inflammation. Examples of inflammatory conditions for which methylprednisolone is used include rheumatoid arthritis, systemic lupus erythematosus, acute gouty arthritis, psoriatic arthritis, ulcerative colitis, and Crohn's disease. Severe allergic conditions that fail conventional treatment also may respond to methylprednisolone. Examples include bronchial asthma, allergic rhinitis, drug-induced dermatitis, and contact and atopic dermatitis. Chronic skin conditions treated with methylprednisolone include dermatitis herpetiformis, pemphigus, severe psoriasis and severe seborrheic dermatitis. Chronic allergic and inflammatory conditions of the uvea, iris, conjunctiva and optic nerves of the eyes also are treated with methylprednisolone.

DOSING: Dosage requirements of corticosteroids vary among individuals and the diseases being treated. In general, the lowest effective dose is used. Corticosteroids given in multiple doses throughout the day are more effective but also more toxic than the same total daily dose given once daily, or every other day. Methylprednisolone should be taken with food.

DRUG INTERACTIONS: Troleandomycin (TAO), an infrequently used macrolide antibiotic, reduces the liver's ability to metabolize methylprednisolone (and possibly other corticosteroids). This interaction can result in higher blood levels of methylprednisolone and a higher probability of side effects. Erythromycin and clarithromycin (Biaxin) are likely to share this interaction, and ketoconazole (Nizoral) also inhibits the metabolism of methylprednisolone. Estrogens, including birth control pills, can increase the effect of corticosteroids by 50% by mechanisms that are not completely understood. For all of the above interactions, the dose of methylprednisolone may need to be lowered.
Phenobarbital can increase the metabolism of methylprednisolone and other corticosteroids, resulting in lower blood levels and reduced effects. Therefore, the dose of methylprednisolone may need to be increased if treatment with phenobarbital is begun.

PREGNANCY: Methylprednisolone and other corticosteroids do not appear to pose a risk to the developing fetus.

NURSING MOTHERS: Only minute amounts of methylprednisolone (or other corticosteroids) appear in mother's milk after consumption of standard doses. Doses reaching the infant are far lower than the infants adrenal glands produce themselves.

SIDE EFFECTS: Methylprednisolone side effects depend on the dose and the duration and the frequency of administration. Short courses of methylprednisolone usually are well-tolerated with few and mild side effects. Long term, high doses of methylprednisolone usually will produce predictable and potentially serious side effects. Whenever possible, the lowest effective doses of methylprednisolone should be used for the shortest length of time to minimize side effects. Alternate day dosing also can help reduce side effects.
Side effects of methylprednisolone and other corticosteroids range from mild annoyances to serious irreversible bodily damage. Side effects include fluid retention, weight gain, high blood pressure, potassium loss, headache, muscle weakness, puffiness of the face, hair growth on the face, thinning and easy bruising of the skin, glaucoma, cataracts, peptic ulceration, worsening of diabetes, irregular menses, growth retardation in children, convulsions, and psychic disturbances. Psychic disturbances may include depression, euphoria, insomnia, mood swings, personality changes, and even psychotic behavior.
Prolonged use of methylprednisolone can depress the ability of the body's adrenal glands to produce corticosteroids. Abruptly stopping methylprednisolone in these individuals can cause symptoms of corticosteroid insufficiency, with accompanying nausea, vomiting, and even shock. Therefore, withdrawal of

methylprednisolone usually is accomplished by gradual tapering the dose. Gradually tapering methylprednisolone not only minimizes the symptoms of corticosteroid insufficiency, it also reduces the risk of an abrupt flare of the disease being treated.

Methylprednisolone and other corticosteroids can mask signs of infection and impair the body's natural immune response to infection. Patients on corticosteroids are more susceptible to infections and can develop more serious infections than individuals not on corticosteroids. For example, chicken pox and measles viruses can produce serious and even fatal illnesses in patients on high doses of methylprednisolone. Live virus vaccines, such as small pox vaccine, should be avoided in patients taking high doses of methylprednisolone since even vaccine viruses may cause disease in these patients. Some infectious organisms, such as tuberculosis (TB) and malaria, can remain dormant in patients for years. Methylprednisolone and other corticosteroids can allow these infections to reactivate and cause serious illness. Patients with dormant TB may require anti-TB medications while undergoing prolonged corticosteroid treatment.

By interfering with the patient's immune response, methylprednisolone can prevent vaccines from being effective. Methylprednisolone also can interfere with the TB skin test and cause falsely negative results in patients with dormant TB infections.

Methylprednisolone impairs calcium absorption and new bone formation. Patients on prolonged treatment with methylprednisolone and other corticosteroids can develop osteoporosis and an increased risk of bone fractures. Supplemental calcium and vitamin D are encouraged to slow this process of bone thinning. In rare individuals, destruction of large joints can occur while undergoing treatment with methylprednisolone or other corticosteroids. These patients experience severe pain in the joints involved, and can require joint replacement. The reason behind such destruction is not clear. Methylprednisolone can be used in pregnancy, but is generally avoided.

END OF INFORMATION – NOTHING FOLLOWS